Complete Summary

GUIDELINE TITLE

Use of endoscopy in diarrheal illnesses.

BIBLIOGRAPHIC SOURCE(S)

Eisen GM, Dominitz JA, Faigel DO, Goldstein JA, Kalloo AN, Petersen BT, Raddawi HM, Ryan ME, Vargo JJ 3rd, Young HS, Fanelli RD, Hyman NH, Wheeler-Harbaugh J. Use of endoscopy in diarrheal illnesses. Gastrointest Endosc 2001 Dec;54(6):821-3. [20 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Diarrheal illnesses

Note: Chronic diarrhea falls into three categories: osmotic diarrhea, deranged electrolyte transport diarrhea, and enterocyte damage and death with inflammation; these correspond to malabsorptive, secretory, and inflammatory diseases.

GUIDELINE CATEGORY

Diagnosis
Evaluation

CLINICAL SPECIALTY

Gastroenterology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide guidelines for the appropriate use of endoscopy for the diagnosis, evaluation, and management of diarrheal illnesses

TARGET POPULATION

Patients with diarrhea

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Lower endoscopy with or without biopsy
    - Colonoscopy
    - Flexible sigmoidoscopy
2. Stool testing for pathogens (in patients with human immunodeficiency virus [HIV])
3. CD4 cell count in HIV patients
4. Upper endoscopy with or without biopsy
    - Esophagogastroduodenoscopy (EGD)
    - Enteroscopy
5. Histopathology

MAJOR OUTCOMES CONSIDERED

- Signs and symptoms
- Sensitivity of diagnostic tests

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A literature search was performed to identify relevant studies on each topic. Each study was then reviewed for both methodology and results.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Guidelines for the appropriate practice of endoscopy are based on critical review of the available data and expert consensus.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

When appropriate, the guidelines are submitted to other professional organizations for review and endorsement.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Diarrheal illnesses can be associated with significant morbidity and mortality, especially in high-risk populations such as the very young and the elderly. There is a broad differential diagnosis and numerous diagnostic tests that may be utilized to discern underlying pathology. Endoscopic evaluation with mucosal assessment and biopsy may be particularly helpful in the diagnosis of diarrhea. Diarrhea is now generally defined as a stool mass exceeding the normal adult average of 200 grams/24 hrs. However stool consistency and frequency may also determine whether a patient complains of these symptoms. There also remains lack of consensus on the differentiation of acute versus chronic diarrhea. Most clinical studies utilize 3 to 4 weeks as a cut-point to differentiate acute from chronic diarrhea.

Lower Endoscopy

Lower endoscopy has been established as an essential procedure in the evaluation and management of colonic disease. Lower endoscopy is generally indicated if a change in management is likely to be based on the results of the procedure, or if a specific therapeutic procedure is planned. Most diarrhea is caused by an acute self-limited infection. These infectious diarrheas are exceedingly common and short-lived and rarely require specific therapy. They are not, therefore, an indication for endoscopy-colonoscopy.

Diarrhea, however, may be associated with symptoms or signs which suggest an etiology that requires an accurate diagnosis and specific therapy. The presence of rectal bleeding, severe abdominal pain, fever, leukocytosis, and negative stool tests for pathogens justifies a diagnostic evaluation. Lower endoscopic evaluation, such as unprepped sigmoidoscopy, may allow rapid determination of active Clostridium difficile infection.

Lower endoscopy is of value in the patient with unexplained chronic diarrhea, defined as diarrhea lasting more than 3 weeks. Chronic diarrhea falls into three categories: osmotic diarrhea, deranged electrolyte transport diarrhea, and enterocyte damage and death with inflammation; these correspond to malabsorptive, secretory, and inflammatory diarrheas. Such a categorization may direct the physician to certain diagnostic pathways. However, a significant overlap between the three mechanisms is always possible. In addition to the traditional work up of diarrheal states, endoscopic procedures can play a pivotal role in the evaluation of patients with chronic, unexplained diarrhea.

Evaluation of the colonic mucosa and biopsy are helpful in ruling out inflammatory bowel disease, ischemic colitis, collagenous and microscopic colitis, and neoplastic disease.

Consensus is lacking on whether colonoscopy or flexible sigmoidoscopy should be the initial endoscopic test in patients with chronic diarrhea. The advantage of the latter is that there is no need for sedation and has simpler preparation, and it is a shorter procedure that has less risk and costs. However, colonoscopy allows evaluation of the proximal colon and terminal ileum. In patients with suspected inflammatory bowel disease, malignancy, and or gross/occult bleeding, colonoscopy may be preferable. Most pathologic processes other than those just mentioned tend to be diffuse and should be diagnosed on flexible sigmoidoscopy alone. However, up to 10% of microscopic/collagenous colitis may only involve

the right colon. A more recent study found that 57 of 58 patients with microscopic colitis would have been diagnosed by flexible sigmoidoscopy alone. However, if a flexible sigmoidoscopy is non diagnostic and symptoms persist, colonoscopy should be performed. There has yet to be a prospective randomized study of the utility of colonoscopy versus flexible sigmoidoscopy for chronic diarrhea evaluation. Clinical decision-making should be individualized.

The evaluation of patients with compromised immunity and diarrhea should be considered separately. Patients with human immunodeficiency virus (HIV) and diarrhea require stool testing for pathogens. Lower endoscopy with biopsy is generally indicated if the diarrheal illness is problematic and initial/basic stool tests fail to reveal the etiology of their diarrhea. A recent study showed that flexible sigmoidoscopy (rather than colonoscopy) with biopsy is the appropriate test when stool studies are negative in individuals with CD4 counts less than 100 cells/mm^3. Upper endoscopy may also be considered if diarrhea persists despite what appears to be appropriate therapy. In patients with HIV and weight loss, a pathogen is identified by endoscopy in 30 to 45% of HIV patients with diarrhea and negative stool studies. Graft-versus-host disease (GVHD) after bone marrow transplantation can be diagnosed by endoscopic biopsy in up to 80% of patients with gastrointestinal (GI) symptoms (anorexia, nausea, vomiting, early satiety, abdominal pain, and/or diarrhea). The differential diagnosis includes toxicity from chemotherapy regimens and medication side-effects, and viral, bacterial, and fungal enteric infections. Mucosal biopsies are the gold standard to establish GVHD and to distinguish it from other commonly encountered infections and pathologies. Upper endoscopy with gastric and small bowel biopsies is the procedure of choice since endoscopic appearance of the mucosa alone is not sufficient to establish (or exclude) a diagnosis; positive biopsies may be found in patients with a normal endoscopic appearance. Colonic and rectal biopsies can be performed, but are less sensitive (55% vs. 90%) than gastric/small bowel biopsies.

Upper Endoscopy (Esophagogastroduodenoscopy (EGD) and Enteroscopy)

While most individuals initially focus on large bowel abnormalities in the evaluation of patients with diarrheal illnesses, upper endoscopy may play a role in the work up of these patients.

Acute diarrheal illnesses are generally caused by infections involving the lower GI tract. Use of upper endoscopy in these self-limited disorders, is therefore not indicated.

Patients with chronic diarrhea initially should undergo evaluation of the lower GI tract via colonoscopy. In the absence of significant findings suggesting the cause of diarrhea, an upper GI evaluation may ensue. The differential diagnoses for diarrheal illnesses involving the upper GI tract include infections such as Giardia and bacterial overgrowth or small bowel diseases and pancreatic diseases resulting in malabsorption. Giardia, a parasitic infection, colonizes the duodenal mucosa, resulting in symptoms that may mimic peptic ulcer disease. In patients at high risk for Giardia, an upper endoscopy with biopsy and aspirate for smear can establish the diagnosis. An aspirate of small intestinal contents may be obtained for qualitative and quantitative culture.

In patients with unexplained diarrhea with a negative colonoscopy, small bowel disease should be considered. This is especially true when a stool collection and clinical presentation suggest malabsorption. Upper endoscopy can then be performed to evaluate proximal small bowel mucosa. Proximal duodenal biopsies should be avoided, due to pseudoflattening of the mucosa overlying Brunner's glands. Specific diagnoses such as Whipple's disease, celiac sprue, and/or other malabsorptive syndromes can be established with diagnostic biopsies. A positive screening test for sprue, such as endomysial antibodies or tissue transglutaminase, should be confirmed with biopsies. Some advocate establishing histopathologic changes prior to treatment. Usually 2 or 3 biopsies obtained in the second or third portion of the duodenum with regular sized forceps is sufficient. While upper endoscopy is generally the procedure of choice, evaluation of the more distal small bowel may be beneficial in some specific cases (e.g., persistent symptoms in suspected sprue). Barium small bowel studies should not be considered sufficient to make the diagnosis of sprue.

Enteroscopy, especially in cases where patients have occult blood in their stools, may be warranted. This is especially true for patients with suspected Crohn's disease limited to the small bowel.

Summary

Judicious utilization of endoscopy (both lower and upper) can greatly aid in diagnosing the etiology of chronic diarrhea. Directed mucosal biopsies for culture and histopathology may lead to rapid disease ascertainment and therapy.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting each recommendation is not specifically stated.

Controlled clinical trials are emphasized, but information is also obtained from other study designs and clinical reports. In the absence of data, expert opinion is considered.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Endoscopic evaluation with mucosal assessment and biopsy may be particularly helpful in the diagnosis of diarrhea.
- Consensus is lacking on whether colonoscopy or flexible sigmoidoscopy should be the initial endoscopic test in patients with chronic diarrhea. The advantage of the latter is that there is no need for sedation, simpler preparation, and it

is a shorter procedure that has less risk and costs. However, colonoscopy allows evaluation of the proximal colon and terminal ileum.

POTENTIAL HARMS

None stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- Practice guidelines are meant to address general issues of endoscopic practice. By their nature, they cannot encompass all clinical situations. Clinical situations may justify a course of action at variance to these recommendations.
- There has yet to be a prospective randomized study of the utility of colonoscopy versus flexible sigmoidoscopy for chronic diarrhea evaluation. Clinical decision-making should be individualized.
- The information in this guideline is intended only to provide general information and not as a definitive basis for the diagnosis or treatment in any particular case. It is very important that individuals consult their doctors about specific conditions.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Eisen GM, Dominitz JA, Faigel DO, Goldstein JA, Kalloo AN, Petersen BT, Raddawi HM, Ryan ME, Vargo JJ 3rd, Young HS, Fanelli RD, Hyman NH, Wheeler-Harbaugh J. Use of endoscopy in diarrheal illnesses. Gastrointest Endosc 2001 Dec;54(6):821-3. [20 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Dec

GUIDELINE DEVELOPER(S)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society for Gastrointestinal Endoscopy

GUIDELINE COMMITTEE

Standards of Practice Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Society for Gastrointestinal Endoscopy (ASGE) Web site.

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on October 18, 2004. The information was verified by the guideline developer on November 5, 2004.

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